Katrina and the Waves: College Student News Information Seeking at times of Prolonged Disaster Coverage.

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ABSTRACT:

Printed surveys, administered at several educational institutions in the Southeastern U.S., studied three basic research questions regarding use, and perception, of news sources for information about two natural disasters, Hurricane Katrina and the tsunami that struck parts of Asia at the end of 2004. Research questions addressed proximity effects on the selection of news sources, the role of experience and familiarity with the affected area on perceptions about news coverage, and the factors driving changes in media preference and use. The data showed that proximity, both directly and as a indicator of likely experience and familiarity, largely explained differences in preference and use between media, and differences in perceived coverage of the two disasters. The data also validated suggested trends in media use, particularly the shift from print to electronic media forms, and the rise of the Internet as the preferred source of college audiences.
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On December 26, 2004, an earthquake measuring up to 8.7 on the Richter scale struck off the Indonesian island of Sumatra, creating a massive tsunami that killed nearly 300,000 people, and left behind about $14 billion U.S. dollars in damage (Anglionby, Ramesh, McCurry, and Barkham, 2005; Ranganathan, 2005). On August 29, 2005, Hurricane Katrina slammed into the U.S. gulf coast, leading to the deaths of more than 1,300 people, and leaving hundreds of thousands homeless. The damage estimates keep rising into the tens or even hundreds of billions of dollars (Franzen and Staff, 2006, Gopalakrishnan, 2005). Media coverage of each event was extensive, and in each case resulted in considerable criticism of coverage and journalistic behavior.

In addition, these two events were arguably pivotal events in the transformation of news and information-seeking behaviors. Not only did people rush to the Internet and Web to find out breaking news, but they also discovered the Internet was a valuable resource for background information, for solace and shared-grieving, and for developing and discovering ways in which to provide aid and assistance to the afflicted. Furthermore, in these cases more traditional communication systems were limited (in the case of southeast Asia) and/or disrupted by the disasters. The nature of the Internet, however, enabled it to bypass many of these limits, providing for communication when other systems were still struggling to be re-established.

The Project for Excellence in Journalism (Rosentiel, 2006) recounted several anecdotes from the tsunami, the London bombings of July 2005, and Katrina, concluding, “It’s no longer a secret that disasters push people online in droves.” Part of this is the ability to access Internet sites of traditional media outlets located at or near the site of the disaster. However, the activity
is not just information-seeking from established news outlets, often citizen journalists share both new information, photos, video, and commentary.

This research study uses news coverage and public interest in these twin disasters to advance, examine, and test three general research questions. First, it checks on the traditional journalistic gatekeeping value of proximity, which suggests that the nearness of events is a factor influencing coverage of, and audience interest in, and attention to, news stories. Giddens’ (1984) Theory of Structuration proposed the interaction of actors with contexts are relational to one another within the confines of geography and social research. Sood, Stockdale, and Rogers (1987) expand upon Giddens theory by suggesting that “recursive patterns of interaction between the news media, publics, and policy makers might more accurately characterize the effects of news media coverage in disasters” (p.38). With one event (Katrina) more proximal, in both geography and time, this led to the hypothesis that there should be greater reports of student use of news coverage of Hurricane Katrina than of the tsunami.

Secondly, this research examines whether proximity may also play a role in differences in student perceptions about the two disasters. News media have a tendency to construct stories to fit standard routines, schema, or frames, and may distort reality in order to do so. Ajrouch (1998), drawing upon Tuchman (1978) and Gans’ (1979) ideology of objectivity, infers that media coverage is based on (1) human reaction to an event as factor of news value, (2) news selection is part of the media’s ability of personify the event, and (3) everyday experiences of news personnel affect the selection process of newsworthy events. Much of the criticism and mistrust of the press is rooted in conflicts between the socially constructed realities of the press and those of audience members. Thus respondents should be more likely to be critical of the media coverage of something to which they have greater personal familiarity, experience, and
exposure (Katrina), than they will of news coverage of an event with lesser familiarity and fewer opportunities to compare coverage with personal experience (the tsunami).

Finally, this study will investigate the media use patterns of college audiences with respect to those events. There is ample evidence that this group tends to differ from older cohorts in media use and attitudes, and Internet access and literacy are becoming endemic in the college environment. If these events were triggering factors prompting a shift to more interactive information sources, it would be more likely to be evidenced with this group. Thus, we sought to focus on the college audience, and look for shifts in their use of differing media sources for news and information seeking in a context that might trigger a transition to more interactive and/or timely media channels.

Foundations

Each of these three research areas are all well grounded in theory and research. In this section, we will discuss the theoretical and research foundations and develop specific research questions and hypotheses.

Proximity Effects on News Source Use

The first research question dealt with the idea that the proximity of an event can impact coverage and the use of news stories about that event. Theory and research suggest that news editors and producers select, and audiences are more interested in seeing, events that are geographically closest to the audience (White, 1950; Adams, 1986; Harmon, 1989; Shoemaker, 1991, Van Belle, 2000; Singer 2001). Singer points out that most people read print newspapers to get local information because it is the core of newspaper coverage. She suggests the same is true for readership of online versions of newspapers. Morton and Warren’s study (1992) on the publication of public relations news releases also stressed the importance of localization. Not
surprisingly then, many people turn to the news for regular coverage of events and information
directly related to their own location, making the impact of news greatest when it is local
(Barnhurst 2002).

In addition, a number of active audience theories, such as media dependency (Ball-
Rokeach & DeFleur, 1976), uses and gratifications (Blumler & Katz, 1974; Rosengren, Wenner
& Palmgren, 1985; Rubin, 1994), and information seeking (Graber, 1988) suggest that audience
interests drive media use. Although applicable across disparate media, these theories predate the
use of the Internet and the Web for news. Therefore Web Theory should be included, which is an
extension of established media effects theories and proposes a cultural production thesis focusing
on the Web’s duality of use (eg., publisher and reader, buyer and seller, etc.) based on its
growing interactive functionality (Burnett and Marshall 2003).

Research on media gratifications has identified proximity as a salient characteristic, and
research on both domestic and international news gatekeeping has validated the role of proximity
in news influencing news coverage. While this study will not directly address coverage, it is a
predicate condition to media use. In other words, people can't easily pay attention to stories that
are not covered. American’s connection to a crisis coverage is based upon the sensational or
“gee-whiz” (Moeller, 2006, p175) factor and whether it is a simple emergency or “Act of God”
(p. 185). According to Moeller, “simple emergencies call for a straightforward response,”
(p.185) which the need for food, medicine and shelter are requested. Complex emergencies such
as war, migration of refugees, and other “man-made” crises not only need humanitarian aid, but
require political or military intervention. The media shy away from prolonged coverage of the
complex emergencies due to the commitment of long-term coverage and the lack of a clear
solution to the immediate problem. Theory and research thus suggest greater interest in proximal
events, and thus the greater likelihood of using media sources to follow coverage of those events. This leads to the development of the following hypothesis:

\[ H1: \text{There will be greater use of media sources to follow the proximal event than the more distant event.} \]

In addition to proximity as a factor, disasters also score well on several other aspects related to news value and salience to both gatekeepers and audiences. Peri (1998) coined the term “disaster marathons” for breaking news events covered non-stop by traditional broadcasters or all-news cable networks. He claimed such occurrences “maximize television journalist’ tendency toward melodramatic coverage, thus creating an atmosphere that undermines the public’s ability to form a considered opinion.” Nevertheless, that doesn’t seem to stop viewers from flocking to continuous coverage of disasters. A quick glance at the following chart (Figure 1) of U.S. cablecaster ratings reveals a clear pattern. Viewership spiked during the 2000 presidential election crisis, the 9/11 terror attacks, and the Iraq invasion (Rosentiel, Project for Excellence in Journalism, 2005).

Figure 1: Audience spikes for cable news networks
Although the chart does not cover the events in question, it is enough to suggest the following hypothesis:

**H2: Use of media sources in general should be higher following disasters than during more typical periods.**

As noted above, audience expectations and needs also drive media use. Prime among these is the expectation that a news source will deliver the information sought. In times of breaking stories such as disasters, two factors should differentiate preferred sources: those likely to provide greater coverage, and those providing more original, immediate, and/or timely coverage.

The first of these factors, coverage, is likely to be a result of the combination of several influences. News value of the story is important, and as noted above, proximity plays a role in news values and gate-keeping. Proximity may also interact with the perceived mission of the news source (Shoemaker & Reese, 1991). From a national network TV news standpoint, twelve weeks after the natural disasters, 355 minutes were dedicated to the tsunami and 956 were given to the Katrina coverage (Tyndall Report, 2006), which offers some reinforcement of the role proximity plays in disaster coverage. Local news outlets tend to focus on local and regional events, although they may also provide coverage of major national and international news, often from a local perspective. This is supported by Quarantelli’s (1988, 2002) findings that local media tended to provide more limited coverage of disasters than national media, unless the disaster is near the local media outlet. Piotrowski and Armstrong (1998) found this to be a factor during their research concerning media preferences during Hurricane Danny. They suggest that the public relied heavily upon local television and radio reports as their major information/news sources. To a lesser extent, they did notice that alternative choices of cable programming did
have an effect upon information source. A third factor is media resources, in terms of the available news hole, the access to reports, and the financial resources to devote to coverage.

The ability to provide quick access to reports, as well as to provide timely updates, drive not only initial information seeking but subsequent use of news sources (Quantarelli, 1988, 2002). In general, electronic media offer more immediate access and timely updates than can print sources, however in-depth news coverage on radio tends to be limited, suggesting that radio will not be widely considered to be a valuable news source for anything other than instructional/utility information (e.g., traffic, weather, etc.). National and international news organizations have a greater emphasis on non-local news events, and are more likely than local sources to have the resources to acquire stories. Internet sources not only offer immediacy, virtually unlimited news hole, access to a wide range of sources (thus enhancing the ability to find original and differentiated coverage and coverage addressing a user’s particular interests) and interactivity, but also provides the opportunity to access news media more proximal to the event than the respondent’s traditional news outlets. That is, the Internet can be seen as offering “virtual proximity” to audiences. In addition, when the media is unable to satisfy the public information need stemming from disaster events, the public will look to itself as the information provider meaning individuals will rely on news from non-mediated sources (Sood, et al. 1987). This suggests that the Internet may offer unique benefits in information-seeking making it an increasingly valued source for breaking news. The amount of web usage in the United States for the month of May in 2006 indicates that four out of the top 10 parent companies own news media outlets (Nielsen Net-Ratings, 2006). This may suggest that the Internet is a viable option in information dissemination.

These considerations lead to the following hypothesis:
H3: Preferences in media use during breaking news events and disasters should be greater for those media sources more likely to provide desired coverage.

Proximity Effects on News Evaluations

The notion that proximity, as an indicator of the likelihood of having personal experience or involvement related to an event, might have an impact on audience evaluation of news stories and coverage is rooted in a variety of cognitive and information processing theories. In particular Festinger’s (1951) Cognitive Dissonance theory and Graber’s (1984) news processing model would both predict that if news frames are in conflict with personal schema and experience, individuals are likely to view news frames as biased or incorrect. Quarantelli’s (1988) early review of research on media and disasters suggested that media reports of disasters do not reflect reality but are rather social constructions. This is supported by Tierney, Bevc, and Kuligowski’s (2006) recent analysis of news coverage of Hurricane Katrina.

Tversky and Kahneman’s research (1973) on personal judgment of frequency and probability led to the availability heuristic, which states that people are more likely to pattern their judgment about the probability or improbability of an event based on the level of prior exposure to the event either in person or via the media. Such heuristic suggests that the more someone encounters media coverage of particular events or crises that the individual changes his cognitive level of personal risk of such events or crises (Fischhoff, et al. 1981, Dietz, et al. 2002). Television news coverage of natural disasters has specifically shown to elicit greater interest on the part of the viewer when the viewer is cognitive of some relationship with the event or crisis (Philo, 2002). Furthermore, as research suggests that news coverage of disasters is distorted, the cognitive and information processing theories would suggest that respondents would be more critical of news stories that conflict with personal experience, and thus would be
more likely to hold negative perceptions and have lower evaluations of media performance. This leads to the following hypothesis:

\[ H4: \text{Respondents will evaluate media coverage of events with which they are more likely to have direct and/or personal experience more negatively than they will media coverage of stories that cover events they are less familiar with.} \]

**Driving Shifts in Media Source Use**

A number of studies, such as those by the Pew Research Center for the People and the Press (2006), have amply demonstrated that media use patterns are shifting over time, and across cohorts. In general, use of print sources is declining over time, both within and between cohorts, and being replaced by electronic sources, principally television and cable. In addition there is the rise of the Internet as a source for news and a variety of alternative information sources. The Internet seems to be continuing the transition. Thirty six percent of 18 to 29 year olds call the Internet their primary news source. For those aged 30 to 49 the figure dips to 30%, only 16% for 50 to 64 year olds, four percent for those over 65 (Pew Research Center for the People and the Press, 2005). Teenagers are even more likely than their older siblings to use the web for news (76% of teens got news online in 2005), and are likely to keep the internet reliance as they age and enter the adult world (Pew Internet and American Life Project, 2005; Consumer Reports, 2005). This suggests the following hypothesis:

\[ H5: \text{There will be age differences in usage of news sources. Older respondents will use print sources more heavily, while younger respondents will use Internet resources more heavily.} \]

Young Americans, of course, use the Internet extensively and for purposes well beyond news. According to the Pew Internet and American Life Project, they use instant messaging, visit a wide range of web sites, join or “lurk” in a chat room, scan online classifieds to buy, sell
or trade items. They also download music, watch a video clips, listen to an audio clips, play online games including fantasy sports, and gamble online. One would expect that greater experience with the Internet might lead to a greater familiarity with the range of non-news Internet resources that could provide pertinent information. This suggests the following hypothesis:

*H6: More sophisticated Internet users will be heavier users of non-news Internet sites and resources.*

### Grounding the Experiment

For this kind of natural experiment to be able to contribute meaningful results, we need to demonstrate that potential respondents were likely to be aware of the events, have followed them somewhat, and that the proximal/distant distinction would provide enough of a distinction be a valid experimental condition.

The Pew Research Center for the People and the Press (2006) kept track of how closely respondents said they had been following these two disaster stories. It’s clear from the Pew Center’s numbers that U. S. poll respondents said they paid significant attention to both stories, and that attention lingered longer for Katrina (see Figure 2). The lesser interest in the tsunami can also serve as an indication that the two events were considered different enough in some aspect that the use of the two events as a natural experiment seems reasonable.

**Figure 2. Percentages reporting how closely they had been following the news event**

<table>
<thead>
<tr>
<th>Event</th>
<th>Very Closely</th>
<th>Fairly Closely</th>
<th>Not Too Closely</th>
<th>Not at all Closely</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katrina* (Sept. 6-7)</td>
<td>70</td>
<td>21</td>
<td>7</td>
<td>2</td>
<td>1000</td>
</tr>
<tr>
<td>Katrina* (Oct. 6-10)</td>
<td>73</td>
<td>21</td>
<td>4</td>
<td>2</td>
<td>1500</td>
</tr>
</tbody>
</table>
Katrina* (Oct. 12-24) 69 24 5 2 1003
Tsunami** (Jan. 5-9) 58 32 7 3 1503

Data from Pew Research Center for the People and the Press (2006)

The comparison between an event occurring in the U.S. (Hurricane Katrina) and one affecting a geographically distant and relatively remote area in Southeast Asia (the tsunami) was felt to adequately distinguish the two events in terms of proximity. The familiarity factor was addressed by conducting the research in an area that was near enough the area impacted by Hurricane Katrina that it was likely that respondents were relatively familiar with the area, and were more likely to have friends and family in the affected area. In addition, it was felt that focussing on a younger target population would lessen the chance that they had direct experience with the region impacted by the tsunami.

The focus on a younger sample, and the narrowing of that target to college audiences was purposive, as this group was felt to be leading the transition, and also have greater access to, and familiarity with the Internet and its resources. As the study focussed on comparative analysis rather than focussing on extrapolating to a general population, a random sample was deemed to be unnecessary.

**Methods**

The data for this survey were collected from printed surveys administered to groups of students, faculty, and staff at several educational institutions in the Southeastern U.S. The surveys were collected in convenience samples, but some effort at diversification included sampling at both private and public institutions, and solicitations in a range of classes and campus locations. This was an area that was not directly affected by Hurricane Katrina, but was
impacted by an influx of refugees and an outpouring of relief efforts. In addition, many in the region were familiar with the locations hit, and had family and friends who were directly affected. Thus, it was presumed that respondents would generally feel greater affiliation with the Katrina disaster than with the Tsunami.

There was an attempt to obtain samples from both journalism and mass communication classes (who might be expected to both pay more attention to coverage and to be more knowledgeable about journalistic practices and expectations, including framing), as well as more general campus populations.

The survey asked a series of questions about general news media use and specific recall how they used news media to follow coverage of each specific disaster. The survey asked respondents to indicate their levels of use of a number of news media, using a Likert scale where 1 indicated that they never used that source, and 7 indicated that they used the source a great deal. Separate sets of questions asked respondents to relate "normal" use, and their use of news sources in the week following each disaster. Respondents were also asked to rank the same sources in terms of order in which they would go to that source for coverage of a major breaking story, and which news source did the best job of covering.

Respondents then were asked a series of twelve items regarding their general perceptions about media coverage in the week immediately following each disaster. The items were phrased as statements regarding various aspects of news coverage, and respondents were asked to respond on a Likert scale where 1 indicated strong disagreement with the statement, and 7 indicated strong agreement. The items included both positive statements about press coverage as well as statements reflecting negative evaluations and perceptions. The two sets of items attempted to measure similar aspects of press coverage of each disaster, although several
wordings were varied to apply more specifically to each disaster. Respondents were asked for their opinion on which news source did the best job of coverage. Standard demographic measures included self identification of gender, ethnicity (the item asked which group the respondent most identified with), age and educational level. Additional questions measured respondents’ level of involvement with journalism and with blogs.

Overall, the sample demographics were in the range of what is expected from these kinds of convenience samples. Details are provided in Table 1.

Table 1. Sample Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Percentage</th>
<th>Valid N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>60.0</td>
<td>572</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>40.0</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Caucasian</td>
<td>83.8</td>
<td>567</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>7.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>18-21</td>
<td>60.3</td>
<td>575</td>
</tr>
<tr>
<td></td>
<td>22-25</td>
<td>19.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26-35</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36-50</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>51 or older</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>High School or Less</td>
<td>4.1</td>
<td>573</td>
</tr>
<tr>
<td></td>
<td>Current Undergrad</td>
<td>73.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Completed Bachelors</td>
<td>3.0</td>
<td></td>
</tr>
</tbody>
</table>
Current Grad Student 7.7
Completed Grad Degree 10.3

Journalism Experience
Had mass comm. course 65.2 526
 Had Journalism course 64.6
Written for school news media 29.7
Professional journalism exp. 10.5

Blog experience
Read regularly 29.2 569
Have own blog 17.2

Note: Values may not add to 100% due to refusals or other responses

Respondents were asked to “indicate how much (they) would normally use (each source) for
gathering news and information about current events. Responses were gathered on a 7 point scale,
where 1 was never used, and 7 was used a great deal. In addition to examining means, we decided
to look at extremes in use, and thus identified “Rare” users as those responding 1 or 2, and “Heavy”
users as those responding with a 6 or 7.

Table 2. “Normal” News Media Use

<table>
<thead>
<tr>
<th>News Source</th>
<th>Mean Use</th>
<th>% “Rare”</th>
<th>% “Heavy”</th>
<th>Valid N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Newspaper</td>
<td>3.31</td>
<td>37.5</td>
<td>11.1</td>
<td>574</td>
</tr>
<tr>
<td>Local TV newscast</td>
<td>4.57</td>
<td>19.1</td>
<td>37.6</td>
<td>571</td>
</tr>
<tr>
<td>Radio</td>
<td>3.51</td>
<td>37.1</td>
<td>18.5</td>
<td>568</td>
</tr>
<tr>
<td>Network TV News</td>
<td>4.71</td>
<td>14.1</td>
<td>40.7</td>
<td>573</td>
</tr>
<tr>
<td>Cable News</td>
<td>4.76</td>
<td>16.2</td>
<td>43.4</td>
<td>573</td>
</tr>
<tr>
<td>Internet News Sites</td>
<td>4.99</td>
<td>14.3</td>
<td>40.1</td>
<td>572</td>
</tr>
<tr>
<td>Other Internet Sites</td>
<td>3.93</td>
<td>32.0</td>
<td>29.4</td>
<td>568</td>
</tr>
<tr>
<td>News Source</td>
<td>Ranked First</td>
<td>Top Three</td>
<td>Not Used</td>
<td>Valid N</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
<td>-----------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>Local Newspaper</td>
<td>2.4%</td>
<td>13.7%</td>
<td>11.9%</td>
<td>547</td>
</tr>
<tr>
<td>Local TV News</td>
<td>12.7</td>
<td>45.2</td>
<td>8.3</td>
<td>553</td>
</tr>
<tr>
<td>Radio</td>
<td>3.4</td>
<td>19.4</td>
<td>13.7</td>
<td>532</td>
</tr>
<tr>
<td>Network TV News</td>
<td>19.7</td>
<td>60.7</td>
<td>8.2</td>
<td>552</td>
</tr>
<tr>
<td>Cable News</td>
<td>30.9</td>
<td>70.0</td>
<td>6.9</td>
<td>554</td>
</tr>
<tr>
<td>Internet News Sites</td>
<td>32.8</td>
<td>65.2</td>
<td>2.3</td>
<td>564</td>
</tr>
<tr>
<td>Other Internet Sites</td>
<td>1.5</td>
<td>19.9</td>
<td>16.6</td>
<td>531</td>
</tr>
</tbody>
</table>

The shift from print to electronic sources is clear in this sample. The shift is repeated when examining media use to follow coverage of the two disasters. As illustrated in Table 3, there is also a general pattern in terms of shifting from more localized news sources to alternatives, and towards sources that can provide more timely coverage of events.

Since our first research hypothesis suggested that there was likely to be more interest in the more proximal disaster (Katrina), and thus greater use of news media in that instance, a series of pair-wise t-tests were used to determine whether there were statistically significant differences in the use of news sources to follow disaster coverage. In all but one case, the differences were statistically significant at normal levels. The sole exception was for news magazines, the least used of all measured sources (more than half the sample reported "rarely" using it as a source.
News magazines are also arguably the source with the least current information. Thus, despite this one instance, we felt it was reasonable to conclude that the data supported H1.

Table 3. Differences in media use for disaster coverage

<table>
<thead>
<tr>
<th>News Source</th>
<th>“Normal” Mean</th>
<th>Best Coverage</th>
<th>Katrina Mean</th>
<th>Tsunami Mean</th>
<th>t-test</th>
<th>p-value (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Newspaper</td>
<td>3.31</td>
<td>8.3%</td>
<td>2.92</td>
<td>2.79</td>
<td>2.09</td>
<td>.019</td>
</tr>
<tr>
<td>Local TV news</td>
<td>4.57</td>
<td>4.17</td>
<td>3.74</td>
<td>6.17</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td>3.51</td>
<td>5.9</td>
<td>3.00</td>
<td>2.77</td>
<td>4.28</td>
<td>.000</td>
</tr>
<tr>
<td>Network TV News</td>
<td>4.71</td>
<td>31.2</td>
<td>4.79</td>
<td>4.49</td>
<td>4.22</td>
<td>.000</td>
</tr>
<tr>
<td>Cable News</td>
<td>4.76</td>
<td>35.0</td>
<td>5.09</td>
<td>4.70</td>
<td>5.44</td>
<td>.000</td>
</tr>
<tr>
<td>Internet News Sites</td>
<td>4.99</td>
<td>17.0</td>
<td>4.95</td>
<td>4.54</td>
<td>5.92</td>
<td>.000</td>
</tr>
<tr>
<td>Other Internet Sites</td>
<td>3.93</td>
<td>3.59</td>
<td>3.33</td>
<td>4.10</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>News magazines</td>
<td>2.84</td>
<td>2.6</td>
<td>2.49</td>
<td>2.47</td>
<td>0.55</td>
<td>.290</td>
</tr>
</tbody>
</table>

The second hypothesis predicted that disasters would prompt greater use of news sources that would be reported as respondent normal, or typical, patterns. Examination of Table 3, however, shows that in only two cases were the average use of a source reported as higher for the period following the disaster. That was for use of Network TV and Cable News during for the Katrina coverage. Differences in respondent use of these news sources were tested for statistical significance using pair-wise t-tests. The difference between usage of Network TV between normal patterns and in the week after Katrina did not prove to be statistically significant (pair-wise t = -1.104, one-tailed p = .135). The difference between normal usage of cable news and reported respondent use during the week following Katrina was statistically significant (pair-
wise $t = -4.964$, one-sided $p = .000$). Due to the limited support (in only one case was there a statistically significant difference in the hypothesized direction), we were unable to accept H2 based on this data.

In addition, there is the issue of determining which media are more likely to provide coverage. Thus, we decided to focus on those source differences that would be appropriate for considering differences in the coverage of the two disasters. In that case, we would expect a greater use of cable and internet sources than other media. The inclusion of cable was due to its larger news hole and ownership links to international video news services. The Internet, on the other hand, offers not only immediacy, but the capability to access media and reports from around the globe, including from the affected areas (where localism should enhance their coverage). In other words, the Internet can provide a kind of virtual proximity effect.

Hypothesis three can be examined through examination of the preferred source for breaking news question, and considering whether those sources offering greater or more valued coverage are given priority. Examining Table 2b shows that the print sources (local newspaper and news magazine) and radio are the sought the least, both in terms of low rank in terms of preference and in terms of the degree to which they are not considered as a place to find breaking news. Broadcast news sources are somewhat more preferred, with network TV news being among the top three ranked sources for more than 60% of the sample. The most preferred sources, though, are cable news and Internet news sites, each being cited as the first source they go to by over 30% of respondents. In addition, only 2.3% of respondents failed to include Internet news sites among their preferred sources.

A Kendall’s $W$ test confirmed that the overall differences in rankings was statistically significant ($Kendall’s \ W = .244$, Chi-Square = 744.42, 6 d.f, $p < .001$). Individual paired
comparisons using Wilcoxon signed rank tests showed that local newspapers ($Z = -11.369, p < .001$), radio ($Z = -9.691, p < .001$), and other Internet sources ($Z = -9.777, p < .001$) were each individually less preferred than local TV news. Other individual comparisons showed that there were statistically significant differences in the rankings between local and network television ($Z = -53.785, p < .001$), between network TV and cable news ($Z = -4.104, p < .001$) and between network TV and Internet news sites ($Z = -2.821, p < .005$), although the difference between cable and Internet news sources was not significantly different ($Z = -0.636, p < .525$). Thus, the research results support and tend to confirm H3.

Table 4 reports on the perceptions of news coverage of the two disasters. In two cases there were slight differences in wording to make the statement particularly relevant to each disaster. In those cases the Tsunami coverage wording is supplied in parentheses. A series of pairwise t-tests were conducted to examine for differences in respondent perceptions of press coverage of Hurricane Katrina vs. the Tsunami. As can be seen, there were generally statistically significant differences in the perceptions of media coverage of the two events. There are a number of reasons that could contribute to these differences: proximity, diminished perceptions over time, differences in the attention paid, as well as the possibility that there were differences in how local and U.S. media covered the two events.

What is perhaps more interesting, however, are the actual responses and the directions of the differences. Hypothesis 4 predicted that perceptions of Katrina coverage would be more negative, as respondents were much more likely to have some direct or personal experience with the area and the people affected by the hurricane, than they would the area and people affected by the tsunami. For the first statement, that media did an excellent job in coverage, there was actually a more positive evaluation of Katrina coverage than of the tsunami coverage. Katrina
coverage was also evaluated more positively for two other statements, regarding the amount of
coverage of relief efforts and providing information on how to help. Upon reflection, though,
these were two measures where there was perhaps less likelihood of distortion, and thus might
not have fit the general negative expectation of the hypothesis. On the other hand, the
differences in perceptions for the remaining statements critical of news coverage, or suggesting
distortions in stories and coverage, were all statistically significant, and in the right direction.
Therefore we felt that Hypothesis 4 was generally supported by the results of this study.

Table 4. Perceptions of Disaster Coverage

<table>
<thead>
<tr>
<th>Statement</th>
<th>Katrina Mean</th>
<th>Tsunami Mean</th>
<th>t-test</th>
<th>p-value (1-sided)</th>
<th>Valid N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media did excellent job in coverage</td>
<td>4.80</td>
<td>4.71</td>
<td>1.36</td>
<td>.588</td>
<td>537</td>
</tr>
<tr>
<td>Stories accurately reflected</td>
<td>4.45</td>
<td>4.66</td>
<td>-3.20</td>
<td>.001</td>
<td>528</td>
</tr>
<tr>
<td>Reporters made themselves part of story</td>
<td>3.68</td>
<td>3.38</td>
<td>4.74</td>
<td>.000</td>
<td>525</td>
</tr>
<tr>
<td>Despite amount of coverage, there was little</td>
<td>3.91</td>
<td>3.60</td>
<td>4.00</td>
<td>.000</td>
<td>523</td>
</tr>
<tr>
<td>real news</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stories focused on negative consequences</td>
<td>5.30</td>
<td>4.82</td>
<td>3.94</td>
<td>.000</td>
<td>515</td>
</tr>
<tr>
<td>News provided good info on how to help relief</td>
<td>5.08</td>
<td>4.77</td>
<td>4.50</td>
<td>.000</td>
<td>525</td>
</tr>
<tr>
<td>efforts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>News emphasized looting and lawlessness</td>
<td>5.09</td>
<td>2.69</td>
<td>25.70</td>
<td>.000</td>
<td>520</td>
</tr>
</tbody>
</table>
Media quick to blame FEMA (the US) for problems/delays in providing relief efforts/funds

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>p</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media quick to blame FEMA</td>
<td>4.89</td>
<td>3.65</td>
<td>15.63</td>
<td>.000</td>
<td>511</td>
</tr>
<tr>
<td>Appropriate amount of coverage of relief efforts</td>
<td>4.44</td>
<td>4.27</td>
<td>2.24</td>
<td>.025</td>
<td>528</td>
</tr>
<tr>
<td>Too much focus placed on New Orleans</td>
<td>5.29</td>
<td>4.47</td>
<td>9.78</td>
<td>.000</td>
<td>530</td>
</tr>
<tr>
<td>Too much emphasis placed on the suffering of people affected by the disaster</td>
<td>3.60</td>
<td>3.20</td>
<td>6.01</td>
<td>.000</td>
<td>529</td>
</tr>
<tr>
<td>Media had unrealistic expectations</td>
<td>3.93</td>
<td>3.56</td>
<td>4.92</td>
<td>.000</td>
<td>524</td>
</tr>
</tbody>
</table>

Note: Responses measured on 7 point scale where 1 = strongly disagree, 7 = strongly agree

Another area of interest is in the changing patterns of news media use. A series of one-way ANOVAs were run to consider the impact of various factors on the use of various news sources. There were statistically significant age differences for all media except local newspapers, local television, and network TV news. Table 5 provided those results, by age group. One caution in interpretation is that roughly 80% of the sample is in the first two age groups (i.e., 18-25 in age). Still, the results generally support Hypothesis 5.
Table 5. Age differences in Normal Media Use

<table>
<thead>
<tr>
<th>News Source</th>
<th>18-21</th>
<th>22-25</th>
<th>26-35</th>
<th>36-50</th>
<th>51 or older</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Newspaper</td>
<td>3.31</td>
<td>3.43</td>
<td>2.98</td>
<td>3.15</td>
<td>3.85</td>
<td>.973</td>
<td>.443</td>
</tr>
<tr>
<td>Local Television</td>
<td>4.74</td>
<td>4.63</td>
<td>4.06</td>
<td>4.12</td>
<td>3.86</td>
<td>2.027</td>
<td>.060</td>
</tr>
<tr>
<td>Radio</td>
<td>3.33</td>
<td>3.50</td>
<td>4.14</td>
<td>4.09</td>
<td>4.00</td>
<td>2.722</td>
<td>.013</td>
</tr>
<tr>
<td>Network TV News</td>
<td>4.77</td>
<td>4.81</td>
<td>4.54</td>
<td>4.56</td>
<td>3.69</td>
<td>.926</td>
<td>.475</td>
</tr>
<tr>
<td>Cable News</td>
<td>4.88</td>
<td>4.84</td>
<td>4.48</td>
<td>4.09</td>
<td>4.29</td>
<td>2.291</td>
<td>.034</td>
</tr>
<tr>
<td>Internet News Sites</td>
<td>4.84</td>
<td>5.04</td>
<td>5.87</td>
<td>4.67</td>
<td>5.04</td>
<td>3.090</td>
<td>.006</td>
</tr>
<tr>
<td>Other Internet Sites</td>
<td>3.89</td>
<td>4.06</td>
<td>4.51</td>
<td>2.81</td>
<td>3.38</td>
<td>3.094</td>
<td>.005</td>
</tr>
<tr>
<td>News Magazines</td>
<td>2.74</td>
<td>3.02</td>
<td>3.46</td>
<td>2.15</td>
<td>2.62</td>
<td>3.218</td>
<td>.004</td>
</tr>
</tbody>
</table>

Values are mean response to a Likert scale where 1 = don’t use at all, and 7 = use a great deal

One particular concern voiced by traditional news sources is the rise and influence of blogs. Blog users, particularly those who have their own blog, are also likely to serve as an indicator for more sophisticated use of the Internet, providing a means for testing hypothesis 6. Thus, we used a series of independent sample t-tests to test for statistically significant differences between those reporting that they regularly read blogs and their use of internet sites for news and information. The test for unequal variances was used due to the differences in subsample size.

Respondent who reported regularly reading blogs reported greater use, at a statistically significant level, of both Internet news sites (normal use, t = 5.886, p<.001; use during Katrina, t = 5.275, p<.001; use during tsunami, 4.365, p<.001) as well as Internet non-news sites (normal use, t = 3.803, p<.001; use during Katrina, t = 4.308, p<.001; use during tsunami, t = 5.098, p<.001). Respondents who reported having their own blog also reported higher use of Internet news sites (normal use, t = 3.107, p<.001; use during Katrina, t = 2.821, p<.003; use during
tsunami, \( t = 1.832, p<.035 \) as well as Internet non-news sites (normal use, \( t = 2.417, p<.085 \); use during Katrina, \( t = 1.704, p<.046 \); use during tsunami, \( t = 2.286, p<.012 \)). Thus, Hypothesis 6 was confirmed.

We also decided to take a brief look at the measured influence of other factors, both out of curiosity and in order to consider whether there was a need to control for their influence. Statistically significant gender differences were found only for use of local and network news sources. The only statistically significant difference for ethnicity was with use of cable news networks. There were statistically significant education differences for use of radio, network TV news, Cable TV News, and Internet News sources, although these were likely to be mirroring age differences. There were statistically significant differences in the use of local newspapers and local television news for those who had taken journalism classes and those who had not, which was likely to reflect the emphasis placed by such classes in following current events and local news. Interestingly, the only statistically significant differences between those who had professional journalism experience, and those who had not, was in the use of printed media sources (local newspapers and news magazines). The limited nature of the statistically significant differences did not indicate a compelling need to control for these influences at this time.

**Discussion**

This research largely confirmed the three main research questions. Regarding proximity, the mean use of all media forms was higher for the closer event, Katrina than for the distant tsunami. In one case (the relatively unused medium of TV news magazines), however, the difference was not statistically significant. Thus, we felt that we had generally strong support for
Hypothesis 1. We were surprised, however, to find limited support for Hypothesis 2. Results indicated that in most cases, respondents reported greater use levels of news sources for “normal” news gathering than they did to follow disaster coverage. Upon reflection, this might be a result of the wording of the disaster coverage questions, which focused on tracking coverage of that event, and not overall use of news sources. In other words, respondents may have been indicating in those questions either a narrow focus on disaster coverage, or the additional amount of news use attributable to following the disaster coverage. Thus, the two sets of responses might not be directly comparable.

Results also suggest that the college audience, and young persons in particular, are also noticeably drifting away from reliance on more local sources of information (local TV newscasts and daily newspapers) to forms that often are national and international in potential scope, the internet and cable news networks. This movement is also reflected in the revealed preferences for news sources. That data thus generally supported Hypothesis 3, confirming that preference for news sources reflect differences in perceptions about the ability of those sources to provide valued coverage and satisfy news gratifications. There is one caveat, however. A large proportion of the sample were taking journalism classes, which tend to encourage, if not require, students to follow local news media. This might have inflated the local media numbers.

The axiom that “familiarity breeds contempt” certainly held up in this analysis. Hypothesis 4 considered whether proximity, as an indicator of likely experience of, and familiarity with, the topic of news coverage, was generally related to greater negative perceptions. Respondents found the tsunami coverage more accurate, and were more likely to criticize Katrina coverage for relaying little real news; focusing on the negative, including looting, lawlessness, and suffering; and holding unrealistic expectations for the possibility of aid.
Katrina coverage also was more heavily criticized for the reporters making themselves part of the story.

Hypothesis 5 considered whether there were meaningful differences in sources of media use by age. The study indicated that there were statistically significant differences for all news sources but local newspapers, local TV news, and network television news. The differences tended to follow the hypothesized pattern, but not necessarily in a linear fashion. That fact, and the fact that sample was not uniformly distributed over the age groups, do mean that support for Hypothesis 5 was limited.

Hypothesis 6 considered whether greater Internet literacy would lead to increased use of Internet sources. Using blog activity as an indicator for Internet literacy, the data strongly supported the hypothesis.

Hurricane Katrina and the tsunami presented moments of “wall-to-wall” coverage of breaking and shocking disaster news. Young people in this environment could seek out traditional and established news outlets such as network TV newscasts and newspapers. Judging by the college students in this survey, they did not. Their media habits instead lean strongly toward 24-hour cable networks and the internet. The respondents simply increased their usage of these familiar forms much more than they sought “old school” news media.

References


The Pew Internet and American Life Project. (2005, Nov. 2). Teen Content Creators and Consumers.

The Pew Internet and American Life Project. “Usage Over Time” spreadsheet:

http://www.pewInternet.org/trends/UsageOverTime.xls


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1 The survey was developed, constructed, and administered as part of a graduate class in quantitative methods. Upon coding, it was discovered that some data collection was done with an earlier draft of the survey that did not include some of the measures on individual media experience/background. Thus, the usable sample size for those measures is lower.